

096161 - KERP/Tucson Ajo Detention Basin, AZ

Contributed by Edward Louie
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Purpose:

Ed Pastor Kino Environmental Restoration Project (KERP) formerly known as the Tucson Ajo Detention Basin provides a solution to the loss of riparian habitat throughout a desert environment experiencing rapid growth and challenging water resources, while maintaining its original status as a flood control facility.

News Release:

April 12, 2006 - NR06-06 - Ed Pastor Kino Environmental Restoration Project Wins Chief of Engineers Excellence Award

Description:

The project looks at restoring a degraded ecosystem by establishing 50-acres of riparian, wetland and upland habitats, including ponds, marshes and streams. Twenty-seven acres of habitat were developed within the Tucson Ajo Detention Basin located along the Tucson Diversion Channel in Pima County, approximately 2 miles south-east of downtown Tucson, AZ.

KERP is the first U.S. Army Corps of Engineers (USACE) restoration project in the southwest. It is also the first environmental restoration project developed by our project sponsor, The Pima County Flood Control District.

Background:

The Tucson Ajo Detention basin (approximately 120-acres) was constructed by the USACE in 1966 as a flood control element which intercepted and reduced peak flows upstream from Tucson Arroyo and Railroad Wash drainage areas. Downstream flows were released gradually into the Tucson Diversion Channel, which merged with the Julian Wash and flowed down to the Santa Cruz River.

In 1981 USACE and the Pima County Flood Control District, developed a master plan for the Tucson Diversion Channel Recreation Development Program. Section 1135 of the Water Resources Development Act of 1986 (Public Law 99-662) "authorizes the Secretary of the Army to implement a program for modifying the structures and operations of existing water resources projects for the purpose of improving the quality of the environment in the public interest."

Sam Lena Park was constructed in 1986 as a result of the master plan. The park however, represented only a portion of the plan. It was updated in 1995 to include multi-use trails from Sam Lena Park to I-19.

The basin experienced increased runoff resulting in an eye sore for the community.

In early 1997, USACE initiated a Preliminary Restoration Plan to determine the feasibility of modifying the basin features for riparian habitat restoration. An Ecosystem Restoration Report followed and was approved in April 1998. The original basin was expanded to 141 acres.

Project Benefits:

KERP has substantially improved the environmental quality of a once bleak, mud flat basin, while maintaining the original function and mission to store and detain flood waters, reducing a 100-year, 24- hour storm event.

USACE worked closely with our sponsor to address their multi-objective approach to managing watercourses, floodplains and storm water resources and protecting natural resources.

Substantial economic benefits have resulted from water harvesting features incorporated in the project design. Pima County now uses harvested urban storm water for environmental restoration, an adjacent park, ball fields, landscaped areas and roadway medians. The harvested storm water helps address the concerns and challenges of a desert community that already pays a premium for water, including the treated effluent from wastewater treatment plants. The water harvesting features in this project will be used as prototypes for water harvesting in at least five subsequent USACE and Pima County projects along the Rillito and Santa Cruz River. The projects include: Tres Rios Del Norte, Paseo de las Iglesias, El Rio Antiguo, Swan Wetlands and Agua Caliente.

Related Links

Articles:

What a “Kino” idea

<http://www.landscapemanagement.net/landscape/article/articleDetail.jsp?id=136622>

Rainbird: Irrigation for a Growing World – The Intelligent Use of Water

http://www.rainbird.com/pdf/iuow/iuow_whitepapers.pdf

Sonoran Desert Plan:

Priority Vulnerable Species in Pima County

<http://www.pima.gov/cmo/sdcp/sdcp2/fsheets/vuln/vuln.html>

Determining Species of Concern Within Pima County, Arizona <http://www.co.pima.az.us/cmo/sdcp/sdcp2/SOC/soc.html>

Vicinity Map

Photographs

Partners and Stakeholders

Pima County Wastewater Department

Pima County Health Department

Pima County Community Resources

University of Arizona

State of Arizona Game and Fish

National Audubon Society

Congressional Representative(s)

Rep. Ed Pastor (D-04)

Rep. Jim Kolbe (R-08)

USACE Contacts

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Non-Federal Sponsor

Pima County Flood Control District

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